

An optimized texture modified diet improves energy and protein intake in hospitalized patients with dysphagia

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RATIONALE

Many hospitalized patients suffer from oropharyngeal dysphagia. Providing adequate nutritional intake for this group of patients is challenging since the texture must be modified to provide a safe swallowing process. These texture modifications often result in foods less appealing, which increases the risk of a low nutritional intake. Therefore, the aim of this study was to assess if an optimized texture modified diet could improve energy and protein intake in patients with dysphagia.

METHODS

An intervention study with a historical control group (CG) was performed. Patients were included from medical and neurological ward at Herlev Gentofte University Hospital. The optimization consisted of changing from serving pre-purchased timbales to serving of home-cooked texture modified organic diet with focus on variation and aesthetics. Dietary intake was registered by the staff. The Harris-Benedict formula was used to estimate the energy requirement and the protein requirement was set to 18 E%. Sufficient energy- and protein coverage were defined as an intake >75% of the requirement.

Table 1: Patient characteristics	Control group (n = 18)	Intervention group (n = 25)
Sex, Female, n (%)	8 (44)	12 (48)
Age, years, mean ±SD	82.7 ±8.9	81.04 ±8.6
Weight, kg, mean ±SD	62.9 ±11.5	77.5 ±20.4
BMI, weight/height ² , mean ±SD	21.4 ±3.5	26.6 ±7.0
Medical ward, n (%)	10 (55)	5 (20)
Neurological ward, n (%)	8 (45)	20 (80)
Energy requirement, kJ, mean ±SD	6701 ±1124	7624 ±1425
Protein requirement, g, mean ±SD	75 ±11.8	93 ±15.1
Length of hospitalization, days ,mean ±SD	11 ±5.8	14 ±8.9

Table 2: Energy and protein intake in the control group and the intervention group.	Control group (n = 18)	Intervention group (n = 25)	P Value
Energy intake (kJ)	4590 ±2471	6146 ±2406	0.020*
Protein intake (g)	38 ±22	57 ±24	0.013*

RESULTS

A total of 43 patients were included (intervention group (IG), n=25). Compared with the CG a significantly higher energy intake was found in the IG, 4590 kJ (±2471) versus 6146 kJ (±2406) (p=0,020). Further, a significantly higher protein intake was found in the IG, 38 g (±22) versus 57 g (±24) (p=0,013). A non-significant increase of proportion of patients in the IG covered their energy- and protein requirement (energy and protein coverage: IG: 52%, 40% vs. CG: 33%, 28%)

CONCLUSION

Optimization of the texture modified diet resulted in a significantly higher energy- and protein intake in patients with dysphagia. However, further research within this field is necessary to secure coverage of energy and protein in this patients group.

Figure 1: Control group Energy coverage

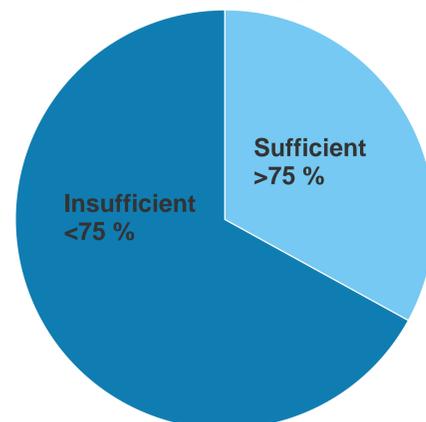


Figure 2: Intervention group Energy coverage

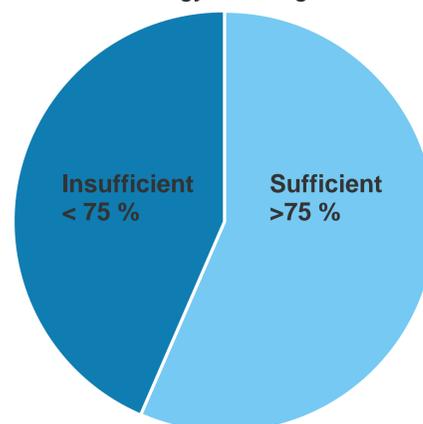


Figure 3: Control group Protein coverage

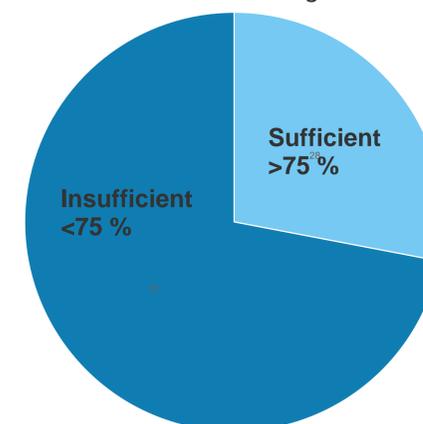


Figure 4: Intervention group Protein coverage

